

CLAIMS

What is claimed is:

1. A device for automatic tufting of upholstery units using tufts comprising a retaining link with a tuft element at either end, said tufts being connected in series to further such tufts, said device including:

    a tufting needle for engaging a tuft which comprises one tuft element and said retaining link;

    a separator for separating said engaged tuft from said connected tufts;

    a piston for driving said tufting needle, together with said one tuft element and said retaining link of said engaged tuft, through an upholstery unit and withdrawing said tufting needle after said engaged tuft is released from said tufting needle;

    said device being adapted so as to be capable of automatically reloading said tufting needle with a further tuft.

2. A device for automatic tufting of upholstery units using tufts comprising a retaining link with a tuft element at either end, said tufts being connected in series to further such tufts in a string, said device including:

    a tufting needle for engaging a tuft which comprises one tuft element and said retaining link;

    a cutter, located in proximity to said tufting needle, for cutting said engaged tuft from said string;

    a piston, coupled to said tufting needle, for driving said tufting needle, together with said one tuft element and said retaining link of said engaged tuft, through an upholstery unit and withdrawing said tufting needle after said engaged tuft is released from said tufting needle; and

    a reloading mechanism for automatically reloading said tufting needle with a further tuft.

3. A method for the automatic tufting of upholstery units, said method including the following steps:

providing a tuft, said tuft comprising a retaining link with a tuft element at either end and connected in series to further such tufts;

engaging the tuft in engagement means;

separating the engaged tuft from the connected tufts;

driving the engagement means, together with one tuft element and the retaining link of the engaged tuft, through an upholstery unit;

releasing the engaged tuft;

withdrawing the engagement means; and

automatically reloading the engagement means with a further tuft.

4. A method according to claim 3, further including the step of aiding the release of the engaged tuft from the engagement means.

5. A method according to claim 3, wherein the upholstery unit is compressed during the process.

6. A method for the automatic tufting of upholstery units, said method including the following steps:

providing a tuft, said tuft comprising a retaining link with a tuft element at either end and connected in series to further such tufts;

engaging the tuft in a tufting needle;

separating said tuft so engaged from the connected tufts;

driving said tufting needle, together with one tuft element and said retaining link of said engaged tuft, through an upholstery unit;

releasing said engaged tuft;

withdrawing said tufting needle; and

automatically reloading the engagement means with a further tuft.

7. An upholstery unit produced by the method according to any one of claims 3 to 6.

8. A tuft assembly comprising a plurality of tufts, each tuft comprising a strip of flexible material having two identical tuft elements at the ends thereof, and each tuft being connected in series to at least one further such tuft.

9. A tuft assembly according to claim 8, wherein the tuft elements are molded around the strip of flexible material.